Life is Movement (Aristotle, 4th century BC)

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EDITORIAL COMMENT

Life is Movement (Aristotle, 4th century BC)

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[in Dutch: 'Bewegen is Overleven']

During our clinical or outpatient contacts we often tell patients with coronary heart disease that physical activity will lessen the burden of their disease, reduce their risk of mortality and enhance their quality of life. However, after delivering this one-liner we have no illusions that patients will start moving and stay active straight away. Many practical barriers deter them and behavioural change, such as adopting a physically active lifestyle, is only achieved when various stages of change have been successfully completed [1].

What really helps is referring patients quickly to an outpatient or clinical cardiac rehabilitation (CR) program. This does not always happen properly, but with the help of allied professionals such as the nursing specialist, the situation (in the Netherlands) is better now than 10 years ago. The number of referrals has also increased due to the Netherlands Society of Cardiology/Netherlands Heart Foundation (NVVC / NHS) Cardiac Rehabilitation Guidelines of 2004, updated in 2011 [2], as well as through the encouragement of the Healthcare Inspectorate.

At the patient's intake, the cardiac rehabilitation goals are clarified and established in consultation with the patient. The intake includes an exercise test (ergometry). Then, with the patient's medical history and exercise test results in hand, a multidisciplinary team decides on a CR program. In Groningen we speak of 'Short Fit', 'Long Fit' and occasionally 'Fit Plus' programs. Underlying the choice is the patient's single, multiple or complex heart-related problems. Often, the backbone of the CR trajectory is exercise, the component applied by the physiotherapist, which gives this allied professional a crucial role in CR. But in addition to physical therapy (and movement agogics), other allied professionals in social work, psychology, dietetics, nursing, case management (logistics and evaluation) as well as the cardiologist all contribute.

In this issue of *Netherlands Heart Journal* (NHJ), movement scientists, epidemiologists, and members of the Royal Dutch Society of Physiotherapists (KNGF) present a concrete proposal for the contents of the movement program [3]. This is an excellent initiative because their own guidelines, established by the physical therapy professionals themselves, stand a better chance of implementation than the cardiologists' guidelines [4]. What we like about the guidelines in their present shape is that they include:

1. Recommendations for physiotherapy prior to heart surgery: for example, respiratory muscle and cough training pre-coronary bypass grafting (CABG), preferably 20 minutes/day starting 4 weeks before surgery [5],
2. Recommendations for postoperative patients, not only for regular endurance training and possibly strength training, but also 'functional exercises'. These exercises enable patients to be more independent for longer and/or able to resume work. Examples here are lifting, carrying, bending over, putting down, pushing, balancing, climbing stairs and turning safely [6]; in other words, physical agility and flexibility. The guidelines explicitly state: 'The patient knows (learns) how to cope with their symptoms', meaning how to 'respond to the demands of life'. With regard to the mobilisation phase, in our opinion, the guidelines correctly point out the opportunities for Clinical Cardiac Rehabilitation offered by a few centres in the Netherlands [7],
3. An option for fatigue-led training, where the familiar Borg scale (Rating of Perceived Exertion, RPE) can give direction. We recommend 'rather tiring' (in Dutch 'tamelijk vermoeiend') (level 12–13 on a scale of 6–20). For endurance exercise outside the home we regularly advise patients to follow the intensity of the Talk Test: 'You can talk but not sing while exercising' [8]. This gives patients

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something to hold on to in the post-CR phase if, for example, they no longer exercise according to heart rate. Again, in our opinion, the post-CR phase is almost more important than actual CR. After all, prevention of relapse in patients, after 6 weeks of exercise / new movement following a sedentary lifestyle, is but one of the core objectives of CR. This touches on the issue of non-adherence or non-compliance. During the program, the patient and the CR team must look for movement / exercises that fit easily in the patient's day to day life [9]. Examples are brisk walking, cycling to and from work, swimming, or trying to connect the patient with what the Americans call a 'Coronary Club' and we in the Netherlands call a 'Hart in Beweging' (HIB, Heart in Motion) club. If patients have anginal symptoms that deter them from making an effort, prophylactic short-acting nitrate use can be considered [10],

4. Acknowledgement of the importance of relaxation, besides training (movement / exercise). In the relaxation part of the CR program, the patient learns how to cope mentally and emotionally with body signals such as rapid breathing and heart beat, shortness of breath and possibly chest discomfort. In our opinion, however, daily aerobic activity (gentle endurance exercises) remains the cornerstone of the exercise program,
5. And, finally, attention for impact assessment, including an exit test and aftercare, for example, by telephone from the case manager and, not forgetting to mention, the CR report to the GP and the referrer.

The authors are rightly cautious in their recommendations for high-intensity interval (HIT) training. The guidelines state that HIT training: 'may be recommended … for patients in poor physical condition'. Research is limited in this area, which is why we think HIT should be supervised very carefully. This does not happen in 'real life'. However, physiotherapists with knowledge and experience of this method should be able to practise it as long as their patients are also motivated to try this type of exercise.

What is rather unusual is how the guidelines use the Physiotherapy Evidence Database (PEDro) scale for rating the quality of randomised studies [11]. Readers of NHJ and relevant literature are more accustomed to three Classes of Recommendation (I, IIa / IIb or III) and three Levels of Evidence (A, B or C).

The guidelines described in 'Exercise-based cardiac rehabilitation in patients with coronary heart disease' (2013) are an excellent addition to the Multidisciplinary CR Guidelines (2011) [2]. Because these new guidelines have arisen from the discipline of physiotherapy, one of our indispensable allied professions, there is a good chance of wide-scale implementation which will contribute significantly to good care for cardiac patients.

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References

1. Prochaska JO, DiClemente CC. Stages of change in the modification of problem behaviors. In Hersen M, Eisler RM, Miller PM (Eds), Progress in behavior modification (pp. 184–214). Sycamore, IL: Sycamore Press; 1992.
2. Commissie Cardiovasculaire Preventie en Hartrevalidatie van de Nederlandse Vereniging voor Cardiologie. Multidisciplinaire Richtlijn Hartrevalidatie 2011. Utrecht: Nederlandse Vereniging voor Cardiologie, Revalidatiecommissie NHS / NVVC en projectgroep PAAHR. 2011.
3. Achttien R, Staal B, van der Voort S, et al. Exercise-based cardiac rehabilitation in patients with coronary heart disease: a practical guideline. Neth Heart J 2013:21. doi:10.1007/s12471-013-0467-y.
4. Balady GJ, Ades PA, Bittner VA, et al. Referral, enrollment, and delivery of cardiac rehabilitation/secondary prevention programs at clinical centers and beyond: a presidential advisory from the American Heart Association. Circulation. 2011;124:2951–60.
5. Hulzebos EHJ, Helders PPJM, van Meeteren NLU. Preoperative physical therapy for elective cardiac surgery patients (Cochrane Review) 2012;(11):CD010118 en. Ned Tijdschr Geneeskd. 2012;156:C1771.
6. Brügemann J. Commentaar op de onderdelen werkhervatting van de Multidisciplinaire Richtlijn Hartrevalidatie 2011. Tijdschrift voor Bedrijfs- en Verzekeringsgeneeskunde (TBV). 2011;19:416–7.
7. Brügemann J, Edel JP, Zijlstra F. Klinische hartrevalidatie. Ned Tijdschr Geneeskd. 2010;154:A1352.
8. Vanhees L, Stevens A. Exercise intensity. A matter of measuring or talking ? J Cardiopulm Rehab. 2006;26:78–9.
9. Myers J. Physical activity: the missing prescription. Eur J Cardiovasc Prev Rehab. 2005;12:85–6.
10. Boden WE, Franklin BA, Wenger NK. Physical activity and structured exercise for patients with stable ischaemic heart disease. JAMA. 2013;309:143–4.
11. Maher CG, Sherrington C, Herbert RD, et al. Reliability of the PEDro scale for rating quality of randomized controlled trials. Phys Ther. 2003;83:713–21. reference 16 of the Guideline.